(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 31 December 2003 (31.12.2003)

PCT

(10) International Publication Number WO 2004/000582 A3

(51) International Patent Classification7: 1/04, 1/46, 1/52

B60D 1/01,

(21) International Application Number:

PCT/US2003/019631

(22) International Filing Date: 20 June 2003 (20.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/390,790 21 June 2002 (21.06.2002)

(71) Applicant (for all designated States except US): THE HOLLAND GROUP, INC. [US/US]; 467 Ottawa Avenue, Post Office Box 2099, Holland, MI 49422-2099 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BUCKLEY, John, T. [US/US]; 1461 Seminole Drive, Holland, MI 49424 (US). ROE, David, O. [US/US]; 12072 Sandy Woods Drive, Grand Haven, MI 49417 (US). VELDHOF, Brian, S. [US/US]; 13961 Foxtrail Drive, Holland, MI 49424 (US). TERPSMA, Eric, M. [US/US]; 767 W. 26th Street, Holland, MI 49423 (US).

(74) Agent: DOLCE, Marcus, P.; Price, Heneveld, Cooper De-Witt & Litton, 695 Kenmoor, S.E., Post Office Box 2567, Grand Rapids, MI 49501-2567 (US).

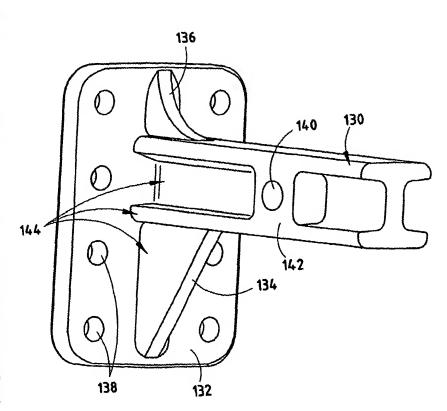
(81) Designated States (national): CA, MX, US.

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of
- (88) Date of publication of the international search report: 29 April 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PINTLE MOUNT



(57) Abstract: A draw bar and universal mount for a trailer hitch comprises a base plate including a first section, a second section and at least two rows of apertures. Furthermore, the draw bar and universal mount includes a shank having a first portion, a second portion and a central portion, the central portion connecting the first portion and the second portion. The shank includes at least one opening and one end disposed on the base plate. The base plate and shank are fabricated from an integral, continuous piece of material.





International application No.

PCT/US03/19631

			PC1/0803/19631	
	SIFICATION OF SUBJECT MATTER			
IPC(7) US CL	: B60D 1/01, 1/04, 1/46, 1/52 : 280/490.1, 491.1, 491.5, 504, 514			
	International Patent Classification (IPC) or to both nat	ional classification an	d IPC	
	DS SEARCHED			
Minimum do	cumentation searched (classification system followed b	v classification symbo	ols)	
U.S. : 28	30/490.1, 491.1, 491.5, 504, 514	,	,	
•				·
Documentation	on searched other than minimum documentation to the	extent that such docur	ments are included in	the fields searched
				•
Elemenia de				
Electronic da	ta base consulted during the international search (name	or data base and, wh	ere practicable, sear	ch terms used)
C. DOC	UMENTS CONSIDERED TO BE RELEVANT		<u> </u>	
Category *	Citation of document, with indication, where a	nronriate of the rele	290c22cn Incu	Relevant to claim No.
X	US 5,873,594 A (MC COY et al) 23 February 1999			1,2,4,8,12,23-26,31,32
	The state of the s	(
Y				60,61,67,71,72,78-
				81,86,87,92- 94,100,104,105
				94,100,104,103
x	US 6,010,142 A (MC COY et al) 04 January 2000	(04.01.2000)- entire o	iocument	37-42,45-59
	, , , , , , , , , , , , , , , , , , , ,	,		
Y				60,61,67-81,86,87,92-
Ý	LIC 4 000 000 A (VEDING et al.) Of Fahrum 1001	(05 00 1001) anti-	d	94,100-110
•	US 4,989,892 A (KERINS et al) 05 February 1991	(05.02.1991)- entire	uocument .	60,78,92
Y	US 4,568,098 A (LANDRY JR) 04 February 1986	(04.02.1986)- entire	document	60,78,92
A	US 6,139,043 A (GRIES et al) 31 October 2000 (3	1.10.2000)- entire doc	cument	1,23,37,60,78,92
A	US 4,033,601 A (LINDAHL et al) 05 July 1977 (05	i.07.1977)- entire doc	ument	1,23
		·		·
<u> </u>				
	documents are listed in the continuation of Box C.	<u> </u>	family annex.	
• S	pecial categories of cited documents:			mational filing date or priority ation but cited to understand the
	defining the general state of the art which is not considered to be		theory underlying the inve	
•				claimed invention cannot be
"E" earlier ap	plication or patent published on or after the international filing date		iovel or cannot be conside cument is taken alone	red to involve an inventive step
	which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as	"Y" document of	narricular relevance: the	claimed invention cannot be
specified)		considered to	o involve an inventive ste	p when the document is
"O" document	referring to an oral disclosure, use, exhibition or other means		ith one or more other such as to a person skilled in th	n documents, such combination e art
P document	published prior to the international filing date but later than the	"&" document m	ember of the same patent	femily
	ate claimed	de document in	ember of the same patern	.anury
Date of the a	ctual completion of the international search	Date of mailing of the	he international sear	ch report
10 February	2004 (10.02.2004)	12	MAR 2004	
	ailing address of the ISA/US			
Mai	Mail Stop PCT, Attn: ISA/US			
	nmissioner for Patents . Box 1450	/ Lesicy Monis	•	
Ale	xandria, Virginia 22313-1450	Telephone No. 703	308-0629	
HODOGODIA NA	F 1114 14115 27211			

Form PCT/ISA/210 (second sheet) (July 1998)

PCT/	US03/19631	

INTERNATIONAL SEARCH REPORT

tegory *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
A	US 3,655,221 A (WARNER) 11 April 1972 (11.04.1972)- entire document	1,23	
A	US 2,847,232 A (GRAHAM) 12 August 1958 (12.08.1958)- entire document	1,23	
	.		
	•		
	·		
,			

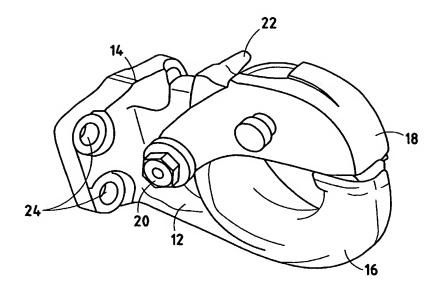


FIG. 1A PRIOR ART

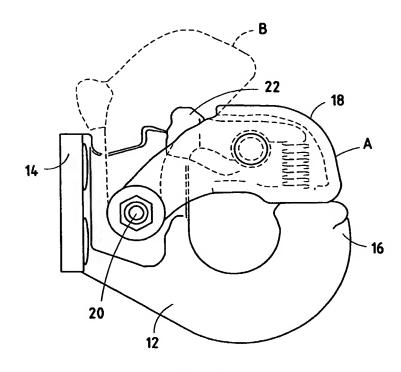
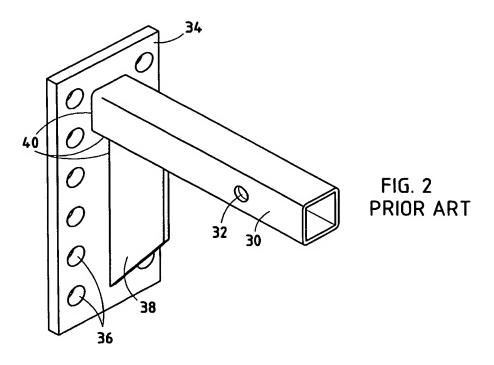
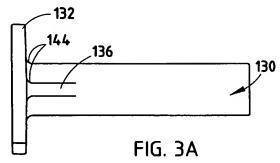
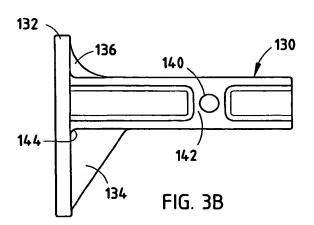


FIG. 1B PRIOR ART







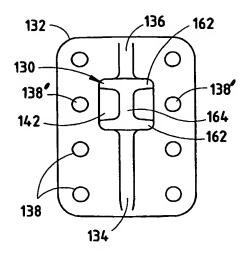
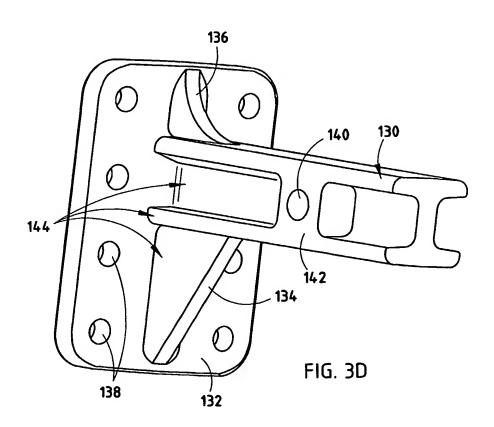
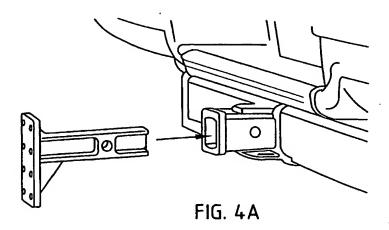
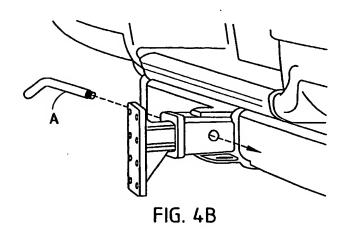
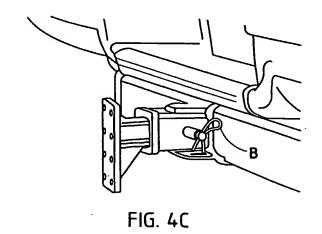


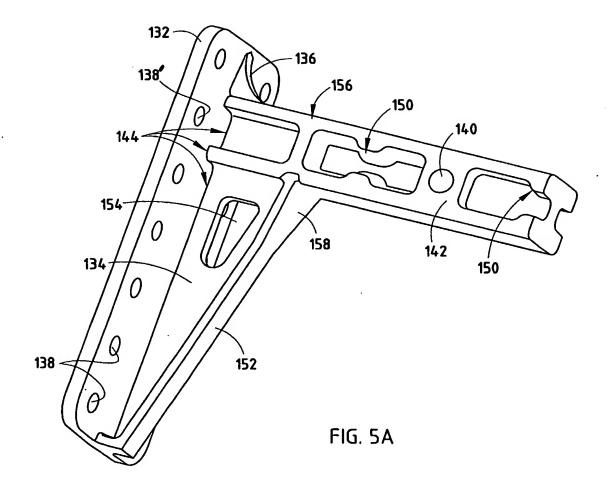
FIG. 3C

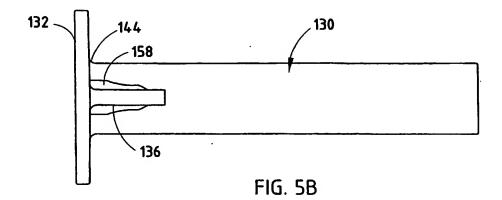


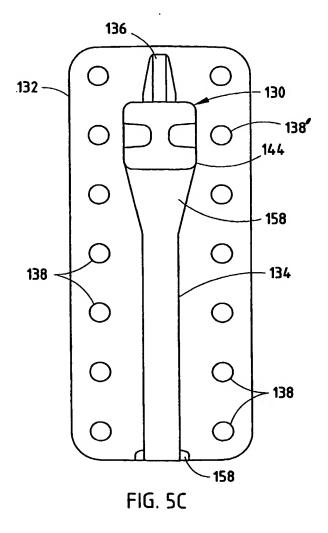


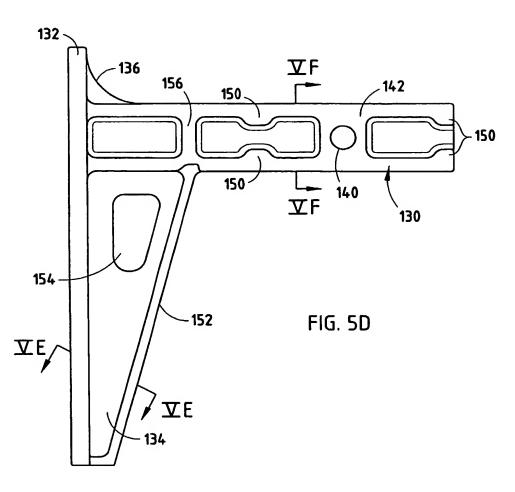


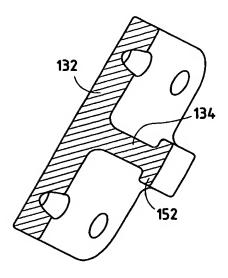














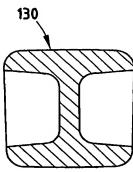
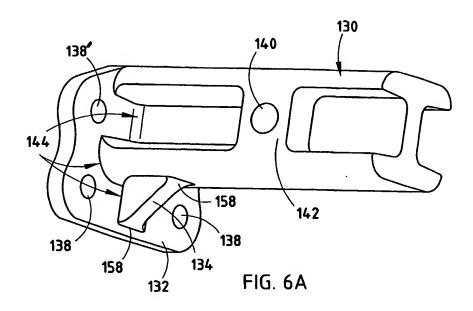
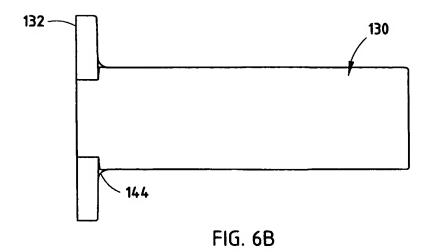


FIG. 5F





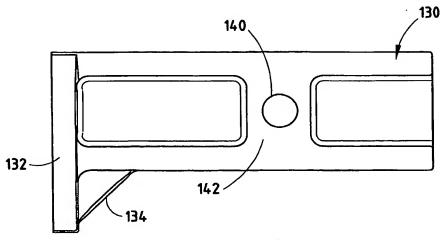


FIG. 6C

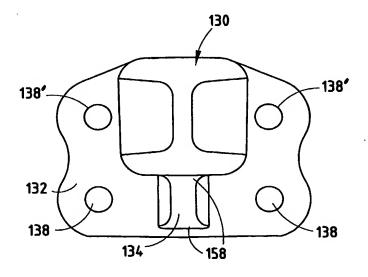


FIG. 6D